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ABSTRACT

In an effort to learn more about the child prone to anxiety when separated from his parents, 60 3-year-old, predominantly white, middle class children were subjects of a parent-teacher study. Each parent completed a scale of 25 items on which his child's anxiety was rated just prior to the child's entrance into nursery school. A teacher-rated scale was then devised to measure the child's separation reaction in the school and was completed for every child immediately at the end of each school day over a 2-week period. (Additional ratings were made later on in the year.) Results indicate that parental ratings of children before entry into nursery school correlate highly with the teachers' ratings. This suggests that separation anxiety prone children can be identified with considerable efficiency before their entry into nursery school. Although later ratings showed lower levels of anxiety in children, correlations remained significant. Tables comprise half the document. A copy of the Parental Anxiety Rating Scale is also included. (MK)

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SEPARATION ANXIETY IN NURSERY SCHOOL CHILDREN*

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The study of separation anxiety in nursery school children has obvious theoretical and practical importance. Nevertheless, a search of the literature reveals a relative lack of systematic and objective studies of anxiety in preschool programs. Heinicke's (1956) extremely valuable study in this area has the limitation of being primarily concerned with children placed in a residential nursery school--a potentially much more traumatic but also much less common experience for children of preschool age. Janis' (1965) clinical study of a single child's attendance at a morning session nursery school is concerned with a more typical childhood experience. This study, full of rich observations and insights, has the obvious limitation of a single case study. A more systematic investigation is that of Schwartz (1970) who designed a rigorous experiment to determine the effects of various intervention techniques on separation anxiety. His failure to find differences among his treatment groups possibly results from the extremely limited forms of intervention undertaken and from a neglect of individual differences in the children's proneness to separation anxiety.

In an attempt to extend our limited knowledge of this phenomenon of separation anxiety the authors have, during the past several years, undertaken interrelated studies on separation anxiety and associated problems in the social and emotional adjustment of the nursery school child.

Among the first questions with which we concerned ourselves, and which we shall discuss here, were questions dealing with the identification of children prone to separation anxiety, the patterning of separation anxiety responses as the child adjusts to the school situation, and the relationship of separation anxiety to other forms of anxiety.

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Subjects and Setting

The subjects were 60 three-year-old, predominantly white, middle class children entering a nursery school program for the first time. Data was collected on four morning session groups, averaging 15 children per group, at two university laboratory nursery schools.

Procedure

A parent-rated scale was devised to give measures of the child's general proneness to anxiety and his specific proneness to anxiety in situations in which he was separated, or threatened with separation, from his parents. This scale was designed to be administered just prior to the child's entrance into nursery school.[1]

The parental Anxiety Rating Scale (PAR) consisted of 25 items relating to typical fears and anxieties in preschool children. Each item was rated on a five-point scale of increasing frequency or intensity of occurrence. The PAR provided two subscales. One subscale PAR_6 consisted of six items all specifically related to the child's reactions to incidents involving or threatening separation from the parents, e.g., reactions to baby sitters, or reactions to being temporarily lost or separated from the parents during a shopping trip. The remaining 19 items, PAR_{19}, related to general fears or anxieties of childhood, such as fears of animals, anxieties about falling or getting hurt, etc.

Using a Horst (1951) modification of the Spearman-Brown formula, a split-half reliability coefficient of .82 was obtained for the total PAR scale with an N of 60 children.

A teacher rated scale was then devised to measure the child's separation reaction in the nursery school. This Teacher's Separation Anxiety Rating (TSAR) scale consisted of 11 items rated on a three-point scale of increasing frequency and/or intensity of occurence. The scale items focused on displayed emotions, tension responses, and interpersonal behavior reflecting anxiety. The TSAR was rated by the teacher immediately following the end of each school day, and it referred to the period of time from when the child entered the nursery school room until the parent or adult who brought him to school took leave and the child

had become engaged in the activities of the day. The separation anxiety rating thus referred to a "behavioral unit" rather than to an arbitrary time unit.

The TSAR was filled out for the children in all four groups for each day of the first two weeks of nursery school. Scores on the scale were then summated over the two-week period to provide a measure of the child's separation anxiety. A two-week period was chosen because preliminary study indicated that it was during the first two weeks of the school year that separation anxiety reactions were most acute.

For two of our groups the teacher rated scale was used for several additional weekly intervals during the course of the school year: namely, the third and final weeks of the fall semester, and for the first two weeks of the spring semester which followed upon a six week intersession break. These particular weeks were selected in order to determine the "base rate" of the separation anxiety reaction after the initial acute phase of the first two weeks was over, and to determine if there was any resurgence in separation anxiety after a vacation period.

Split-half reliabilities for the initial two week separation anxiety ratings were obtained for two of our groups, each scored by a different teacher. The Horst modification of the Spearman-Brown formula gave coefficients of .82 (N=16) and .81 (N=13) for these two groups. Combining the two groups and ignoring teacher differences the split-half reliability rises to .91.

Results

Table 1 presents the correlations of the Parental Anxiety Rating

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Insert Table 1 about here

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scale with the Teacher's Separation Anxiety Rating as summated over the first two weeks. In addition to the total PAR scores, both subscales were separately correlated with the TSAR.

The PAR vs. TSAR correlations were significant and strong for two of our four groups, with an average correlation for all four groups of .41, significant at

the .01 level.

The correlations between the parental rating of separation anxiety reactions, PAR_6, and the TSAR were strong and significant for three of the four groups, with an average correlation among four groups of .70, significant at the .01 level.

The correlations between the parental rating of general anxiety reactions exclusive of separation, PAR_{19}, and the TSAR for the groups considered individually or collectively were not significant.

The differences in the correlations of PAR_6 and PAR_{19} with TSAR take on additional significance in view of the obtained correlation of .46 for PAR_6 vs. PAR_{19} for all 60 subjects. The two subscales, though showing a moderately strong intercorrelation, do not show the same pattern of correlation with TSAR scores. This difference in the correlations of the subscales with TSAR scores reappears again in the following analysis.

Means for the two groups on which we collected TSAR scores during subsequent weekly intervals of the school year are presented in Table 2.

Insert Table 2 about here

Inspection of the table reveals that there is a drop in the means of the TSAR scores over the school year with the drop being more gradual in the case of Group I than Group II. An analysis of variance indicates a significant main effect for time with $p < .01$ ($F = 7.37$, df 5,150) and for the interaction of time and groups with $p < .01$ ($F = 3.79$, df 5,150).[2] A trend analysis also reveals a significant linear component for the main effect of time.

The failure of the TSAR scores to resurge after the six weeks intersession break, and their generally low level after the second week, might suggest that separation anxiety as a phenomenon is limited to the initial entry into school. As a check on this possibility, it was decided to correlate both PAR_6 and PAR_{19} with all the obtained weekly scores. Presumably, if separation anxiety does not occur after the first two weeks, the PAR_6 vs. TSAR correlations will tend toward zero. The relevant data is presented in Table 3 where it is apparent that

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Insert Table 3 about here

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although the correlations of PAR_6 vs. TSAR tend to be lower after the first three week period they do remain significant, with the exception of the final week's correlation which just narrowly misses significance at the .05 level. In contrast, the correlations of PAR_{19} vs. TSAR are invariably insignificant.

Implications and Conclusions

The results of this study indicate that parental ratings of children's proneness to anxiety on separation from the parents before entry into nursery school correlates highly with the teachers' ratings of the children's separation anxiety reaction upon entry into nursery school. One of the most important aspects of this result is the strength of the correlation (.70) which suggests that the PAR_6 subscale can be used to identify groups of separation anxiety prone children before their entry into nursery school with considerable efficiency. This not only furthers the possibilities for research on the causal and concomitant variables of anxiety, but makes feasible the study of educational innovations to reduce separation anxiety in the nursery school child.

The moderately strong correlation (.46) of PAR_6 and PAR_{19} suggests that the separation anxiety prone child is prone to other anxieties. However, the failure of the PAR_{19} scale to correlate with the TSAR scale, in spite of the high PAR_6 vs. TSAR correlations, indicates a degree of specificity to the separation anxiety reaction which requires its study apart from a general proneness to anxiety.

Finally, the patterning of TSAR scores over the school year might suggest that the phenomenon of separation anxiety is largely limited to the first weeks of school. However, the pattern of correlations between PAR_6 and TSAR indicates that although the separation anxiety reaction may be muted after the initial weeks of school, it must continue to be a differentiating factor among the children. This has implications for planning further studies on separation anxiety and its personality correlates.

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TABLE 1

Correlations of TSAR Scores with PAR Scales

	Groups				
	I N = 14	II N = 16	III N = 13	IV N = 14	Average r N = 57
PAR--Tot	.54*	.46	.03	.52*	.41**
PAR--6	.73**	.71**	.53	.76*	.70**
PAR--19	.34	.25	-.16	.26	.21

Note.--TSAR scores summed over first two weeks.

*$p < .05$

**$p < .01$

TABLE 2

Weekly TSAR Mean Scores

	Weeks					
	Semester I				Semester II	
	1	2	3	13	1	2
Group--I (N = 14)	14.0	8.4	7.5	4.9	3.6	2.4
Group II (N - 16)	10.0	2.4	3.6	2.6	1.1	1.3
Total	12.0	5.4	5.6	3.8	2.4	1.8

TABLE 3

Correlations of TSAR Scores with PAR Scales

	Weeks					
	Semester I				Semester II	
	1 N = 30	2 N = 30	2 N = 30	13 N[a]=29	1 N[a]= 29	2 N[a] = 29
PAR--6	.53**	.46*	.50**	.39*	.40*	.34
PAR--19	.17	.03	.14	.22	.30	.21

Note.--TSAR scores summed over one week.

[a]One child was withdrawn from the nursery school program after the first three weeks due to extreme separation anxiety; his ratings after rejoining the class at second semester are not included in these analyses.

* $p < .05$

** $p < .01$

Footnotes

1. In one of our four groups of parents we were not able to distribute the scales to the parents before entrance and so the scale was filled out after the child's first morning at nursery school. Although this could conceivably influence the parental ratings, the analysis of the data did not indicate any way in which this group differed from the other three.

2. The significant interaction may be attributed to the fact that TSAR scores in Group II decrease more rapidly than those in Group I. Since we are primarily interested in the fact that TSAR scores decrease, and the teacher and group differences between groups are confounded, only the significant main effect for time need be addressed.

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Parental Anxiety Rating Scale

Instructions to parents

In the following scale, we are interested in knowing the degree to which various children react to situations which evoke fear and anxiety in children. Different children show fear and anxiety in different areas. We would like you to read the questions and decide whether in these areas your child shows less, about the same, or more fear than other children his age.

If some of the questions are not applicable, please try to answer them on the basis of your child's reactions to similar experiences.

Please put a check (✓) on each scale where you think it best describes your child.

1. Does your child show fear of dogs or other pets when he encounters them outside the home?

Never	Less than other children	About the same	More than other children	A great deal more than other children

2. Is he afraid of the dark?

Not at all	Slightly less	About the same	Slightly more	A great deal more than other children

3. When you take him swimming, is he fearful or apprehensive of the water?

Not at all	Slightly less	About the same	Slightly more	A great deal more than other children

4. Does going to the doctor's upset him?

Not at all	Slightly less	About the same	Slightly more	A great deal more than other children

5. Does he ever express fear of imaginary animals, or animals with which he has not had direct contact such as lions, tigers, dinosaurs, etc.?

Not at all	Slightly less	About the same	Slightly more	A great deal more than other children

6. Do loud household noises, such as the vacuum cleaner or disposal upset him?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

7. Does thunder or lightning frighten him?

Not at all	Slightly less	About the same	Slightly more	A great deal more than other children

*8. When he goes out with you, is he upset or apprehensive unless he takes along his favorite toy or blanket with him?

Not at all	Slightly less	About the same	Slightly more	A great deal more than other children

9. Is he afraid of bees, wasps or other biting or stinging insects?

Not at all	Slightly	Realistic concern	Overconcern	Panic

10. Does he show concern around toileting, such as fear of the noise of flushing or fear of falling into the bowl?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

11. Does having his head washed or hair cut upset him?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

*12. Is he afraid of strangers?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

13. Is he afraid of harmless insects such as beetles, moths, or dragonflies?

Not at all	Slightly	Concern	Overconcern	Panic

14. Does getting dirty disturb him?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

*15. Is he upset when left with a babysitter for an evening?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

16. Does he show fear of domestic animals such as cows, horses, or sheep?

Heedless	Relative lack of	Realistic concern	Somewhat overconcern	Fearful

17. Is he afraid of snakes, toads, frogs, etc.?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

*18. Does he become upset at being lost, such as an accidental separation in the supermarket?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

19. Do cuts and bruises upset him?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

20. Is he afraid to try new foods?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

21. Do loud noises from outside, such as passing fire engines, or air raid sirens frighten him?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

*22. Does he have difficulty mixing with a new group, such as at a party?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

23. Is he upset by violence on television?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

24. Is he overly concerned when he breaks a toy or house hold object such as a glass?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

*25. How much concern or upset does he show when his father/and, or mother is away overnight?

Not at all	Less than other children	About the same	More than other children	A great deal more than other children

Has this situation occurred? NO_____ YES_____
If YES, how often? Rarely_____ Several times_____ Frequently_____

*PAR_6 items

Scoring: A five point scale is used for each item. "Not at all" or "never" = 0, "panic", "fearful", or "a great deal more than other children" = 4. Item scores are summed for total scores.

Teacher's Separation Anxiety Rating Scale

	M	T	W	Th	F
Clings to mother	____	____	____	____	____
Cry, Scream	____	____	____	____	____
Whimpers	____	____	____	____	____
Verbal protest	____	____	____	____	____
Runs after mother	____	____	____	____	____
Shadows mother	____	____	____	____	____
Periodic Return to Mother	____	____	____	____	____
Periodic visual contact with mother	____	____	____	____	____
Vacillates in permitting separation	____	____	____	____	____
Pulls mother into room	____	____	____	____	____
Hesitant (2) vs. Eager (0) entrance	____	____	____	____	____

Scoring Key:

0 = none
1 = occasional (1-3 times), or low intensity
2 = frequently (4 or more), continuously, or high intensity